

APPENDIX G

NEWS STORIES

The majority of media coverage surrounding the fall 1998 200 East Area biological vector contamination event was local, although there was considerable interest and coverage from regional and national media as well.

The issue received a great deal of attention locally, because of the offsite contamination of refuse at the City of Richland Landfill and because of the worker bringing home contamination on his socks. The finding of contamination outside the Hanford Site boundary was obviously of interest to the surrounding communities, as was the phenomenon of radioactive insects and the possibility that they could carry radiation off Site.

The regional and national exposure given this event focused almost exclusively on the insects. The media began to take notice via the Associated Press, in part because of some science fiction references in some of the early local print stories.

Although the science fiction references may have been a bit misleading, the overwhelming majority of local, regional, and national media coverage was accurate and fair. Nearly every piece published on the subject contained statements regarding the lack of a serious health threat and the attempts that the Site was making to correct the problem.

The following pages are copies of all the news stories that the Hanford Site is aware of from both the public, commercial media and the Hanford Site plant newspaper.

NEWSPAPER ARTICLES:

Radioactive ants no work of science fiction	Tri-City Herald 09-29-98
Radioactive socks found in Hanford worker's home	Tri-City Herald 10-01-98
Hanford puzzled by radioactive garbage bin	Tri-City Herald 10-02-98
Hanford digs for more off-site radiation	Tri-City Herald 10-06-98
Fruit flies suspects in Hanford contamination	Tri-City Herald 10-07-98
Hanford trash being removed from Richland	Tri-City Herald 10-08-98
Radiation bugging Hanford	Spokesman Review (Spokane) 10-08-98
Hanford hot spots blamed on radioactive bugs	Seattle Post-Intelligencer 10-08-98
Richland wants transfer station built at Hanford	Tri-City Herald 10-10-98
Hanford works to trap contaminated bugs	Tri-City Herald 10-13-98
Insects spread radiation on nuclear reservation	Arizona Republic (no date)
Radioactive Bugs Found at Nuke Site	Washington Post (Internet) 10-21-98
More Hanford workers tested for exposure to radioactivity carried by fruit flies, gnats	Tri-City Herald 10-22-98
Two more contaminated flies found miles from suspected Hanford origin	Tri-City Herald 11-03-98
Contaminated fly found near trash bin came from B Plant	Tri-City Herald 11-05-98

Hanford digs up backup landfill, collector	Tri-City Herald	11-13-98
Radioactive reading in trash tied to potassium 40 in bag	Tri-City Herald	11-14-98
Richland, DOE reach deal on dumping	Tri-City Herald	12-06-98
Hanford to resume dumping in Richland	Tri-City Herald	12-09-98

HANFORD REACH ARTICLES (WEEKLY PLANT NEWSPAPER):

10-19-98	All-out effort stems spread of contamination
10-26-98	Contamination spread episode winding down
11-09-98	Another contaminated fruit fly
11-16-98	Contract signed for trash disposal services
01-04-99	200 Area contamination spread contained

Radioactive ants no work of science fiction

TRI-CITY HERALD
Tri-Cities, WA

A2
SEP 29 1998

By John Stang
Herald staff writer

They lurk below.

Coming to the surface to hunt for food, to carry it back to their radioactive subterranean lairs.

The fear is there: They might escape from inner Hanford.

They're ants.

Radioactive ones.

And Hanford workers decimated them at their favorite gathering spot a couple of weeks ago. Eight mounds' worth of ants were poisoned.

That spot — maybe a fourth the size of a football field — is west of B Plant in the 200 Area.

Pest control workers have counted 157 anthills in the spot — Hanford's most ant-infested site, said Ray Johnson, an environmental scientist with Waste Management Federal Services Northwest Operations. "There's certainly something out there that attracts them," he said.

Somewhere from 10 to 20 feet below the surface in that spot is a junction box for old underground radioactive waste pipes, which leak.

Red harvester ants burrow down to 20 feet deep. Johnson speculated 10 percent — maybe more — of the mounds in that area end up contaminated, along with the ants.

The problem of radioactive ants isn't new — and it's well documented.

The 1954 sci-fi film *Them* — available on video cassette — chronicled how James Arness and James Whitmore resolved the Army's troubles with ants that grew as big as houses after being exposed to atomic bomb radiation.

The latest documentation of the smaller, less fictional Hanford ants is filed in the inner recesses of the Department of Energy's Reading Room in Richland — where the Sept. 10 discovery of eight contaminated anthills is classified as an "off normal" incident.

Johnson claimed Hanford's ants — unlike the stars of *Them* — haven't mutated into giants headed for Los Angeles.

Could it be because they only were mildly contaminated?

Johnson shrugged off suggestions of any major danger. "We're not missing any HPTs," he said, referring to health physics technicians who monitor Hanford and its workers for contamination.

But a threat does exist.

The wind can blow ants and dirt from the mounds out of the radiological buffer zones and onto clothes or cars, where they could hitch a ride out of Hanford.

The same threat exists with other insects, critters and snakes. Hanford is filled with contaminated nooks and crannies for animals and insects to crawl into.

"It's kind of a menagerie out here. When the engineers design things, they don't think about ants and mice getting into them," Johnson said.

In 1996, a contaminated mouse hitched a ride on some canned food gathered in the 200 Area to end up at the Tri-Cities Food Bank in northern Richland — the farthest anyone knows that a contaminated critter has made it into the city.

The threat has led to technicians methodically surveying Hanford's sagebrush. When a technician finds an contaminated anthill, "he then goes on an ant mound hunt" in the area on the theory hives usually are bunched together.

Dealing with radioactive ants takes patience. Subtlety. Poison.

Digging out a mound just scatters the ants, who then will quit eating until they rebuild.

So poison is scattered around. The ants carry the poison granules inside. And pest control workers wait until the ants eat the poison and die.

Then, the workers shovel out the mounds and deposit ants and dirt at a low-level radioactive waste burial site.

But this is the threat that won't die.

Contaminated ants were first found on this spot and poisoned in 1986. And the process has repeated every few years.

Johnson said: "We'll get by for a few years, and eventually, the ants will be back."

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TRI-CITY HERALD *A4*
Tri-Cities, WA OCT 01 1998

Radioactive socks found in Hanford worker's home

By the Herald staff

Four socks with low levels of radioactive contamination were found in a laundry hamper in a Hanford worker's home this week.

The discovery ended a search that began late Tuesday morning when a Fluor Daniel Northwest worker was leaving one of Hanford's tank farms, where routine radiation checks found some contaminated particles on his boot.

As the worker was checked out further, one of his socks was found to be slightly contaminated with some particles.

It appeared he picked up the contamination on his boots prior to Tuesday, said Fluor Daniel Hanford spokesman Mike Berriochoa.

The worker, who was not identified, was leaving his boots at the site each day but wearing his socks home. So the worker's laundry hamper and the rest of his home were checked for contamination, Berriochoa said.

Four socks were found to be slightly contaminated. The rest of the clothes and house were free of contamination. The worker was checked out on a whole body counter, and was found to be clean of contamination.

The source of the particles was not determined, but Hanford officials speculated that the worker might have stepped in contaminated animal feces.

Hanford puzzled by radioactive garbage bin

By John Stang
Herald staff writer

Officials are scratching their heads over spots of contamination that showed up in a Hanford garbage bin and in a truck that took a load of Hanford trash to Richland's landfill.

But so far, no radioactive contamination has shown up at the city dump, Hanford officials said Thursday afternoon.

The amounts of contamination involved in this week's incident are too small to give a dose of radioactivity to a human, said Bob DeLannoy, environmental safety, health and quality director for DynCorp Tri-Cities Services Inc.

DynCorp is the subcontractor that handles utility matters at Hanford, including trash pickup.

"It's very rare when something like this happens. And when it happens, we take it very seriously," said Fluor Daniel spokesman Mike Berriochoa.

Small amounts of Hanford hazardous wastes have shown up a few times at Richland's landfill in the last couple of years, said Stan Arlt, the city's engineering and utility services director. He was unsure of the number of times.

"We're not seeing a definitive pattern," Arlt said.

Here is what happened, according to DeLannoy:

At 8 a.m. Monday, a health physics technician did a routine survey of an office trailer at central Hanford's B Plant to check for contamination.

TRI-CITY HERALD *A3*
Tri-Cities, WA OCT 02 1998

The technician found some contamination at the trailer, which led to additional checks that found a spot of contamination inside a nearby garbage bin.

The trash bin was cordoned off. People who recently used the trailer were checked and found free of contamination.

And Hanford officials and technicians huddled Wednesday to gather facts on where the contamination in the trash bin could have come from.

They then learned the bin was emptied into a Hanford garbage truck at 7:45 a.m. Monday—shortly before the technician checked the trash bin.

Hanford contacted Richland about 1:30 p.m. Wednesday to say the truck with possibly contaminated trash had gone to the landfill. Hanford technicians went to the dump that afternoon and checked an area for contamination.

Officials then speculated they may have checked the wrong spot, so on Thursday they tested another part of the landfill. No contamination was found then, either, DeLannoy said.

The suspected landfill areas are isolated, and people have been kept out, said DeLannoy and Arlt.

The truck and the trash found in it also have been kept isolated. A 6-inch-square patch of contamination was found near the rear of the truck.

Also, a box was found with a spot of lesser contamination that likely came from the bed of the truck, DeLannoy said.

Investigators still were puzzled Thursday by where the contamination originally came from. The investigation is continuing.

Meanwhile, Hanford and Richland officials are considering whether any further tests are needed at the landfill.

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Tri-Cities, WA OCT 06 1998

Hanford digs for more off-site radiation

By Annette Cary
Herald staff writer

Hanford officials are looking for the source of radioactive contamination found at 11 places on the nuclear reservation, a worker's laundry hamper and possibly the Richland landfill.

On Monday, workers started to dig up a section of the city landfill where trash was dumped from a Hanford garbage bin and a garbage truck that were found to be contaminated.

An initial check of the city landfill found no contamination, but workers began digging up much of the residential and industrial trash dumped the previous Monday for a more thorough check. The Hanford truckload is believed to be buried up to 4 feet deep.

"Any contamination outside of radiation zones on the Hanford site or elsewhere is unacceptable," said Robert Shoup, vice president for environment, safety and health at Fluor Daniel Hanford. "We take any contamination spreads very seriously, and we are committed to making sure that such events don't happen again."

At Hanford, about 10 acres have been roped off for a more thorough search south of the B Plant in the 200 East Area — the likely source of the contamination. Officials are looking for any more contamination and any clues to the source of the contamination.

Most of the contamination was found in that area south of B Plant where mostly union craftworkers, such as carpenters and electricians, are based.

However, a small amount of contamination was found in the 200 West Area five miles away. Shops and equipment from the 200 East Area are being moved to the 200 West Area, since B Plant has been shut down. The two small contaminated spots found there have been cleaned up.

The 11 contaminated spots found ranged from one on the floor of an office trailer about the size of a salad plate to what Hanford officials called a speck on the door of a vehicle.

The largest spot gave off 10 to 12 millirads of radiation an hour. A worker sitting nearby for an hour would receive about the same dose as in a dental X-ray, said Bob DeLannoy, environmental safety, health and quality director for Dyncorp Tri-Cities Services Inc. The company is the subcontractor that handles trash pickup.

Reports of radioactive contamination in areas of Hanford that were supposed to be clean started popping up last week.

Monday, Fluor Daniel officials announced the cases appeared linked. All had pure strontium 90 — a radioactive waste that usually is found mixed with cesium 137.

Officials believe they'll eventually trace the waste back to the B Plant, one of the few places likely to have pure strontium. It's closed except for an adjoining storage pool that holds cesium and strontium. But for 17 years, the plant was used to separate the most radioactive waste from

overheated underground nuclear waste storage tanks.

The first of the 11 contaminated spots was found Sept. 28 in an office trailer near Hanford's B Plant. A routine check for radiation turned up nothing Sept. 25, but after the weekend, a similar check found contamination in the office.

From there, contamination was found in a trash bin and a Hanford garbage truck. A second garbage truck also was contaminated, but it had not gone to the landfill when the radiation was detected.

In all, radioactive contamination was detected at Hanford in two office trailers, five buildings, a government van, the garbage bin and the two Hanford garbage trucks.

Hanford officials also started checking workers in the 200 East Area. Some 40 workers were given "full-body" checks along with a check of their cars. They came up clean. An additional 60 workers have been given less thorough checks for radiation on their skin or clothes.

The checks turned up contaminated particles on one worker's boots last week. He had been leaving his boots at the site each day but wearing his socks home. When his laundry hamper was checked at home, low levels of radioactive contamination were found on four socks.

That and possibly garbage from the contaminated truck are the only radioactive contamination believed to have left Hanford.

Any contamination in the landfill would not be at a high level, but it still is a concern to the city, DeLannoy said.

It is one of a few incidents in recent years of contamination reaching the city landfill, said Stan Arlt, Richland's engineering and utility services director. But this incident could be more serious

than past incidents, he said.

In January 1996, 7 kilograms of nonradioactive hazardous waste was accidentally sent to the city landfill from Hanford. A few months later, two missing 55-gallon drums for low-level radioactive waste turned up at the landfill. No radiation was detected on them.

In a third incident a year ago, protective booties were found at the landfill with slight contamination — about the same radioactive level as the mantle of a camping lantern. The Department of Energy has said they did not come from Hanford.

Since the radioactive waste was found last week, no Hanford waste has been sent to the city landfill. Instead, it's piling up in containers on site.

Richland usually charges \$25 a ton for out-of-town commercial waste dumped at its landfill but charges Hanford \$46 a ton. Hanford officials survey the landfill once a week for radiation.

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Fruit flies suspects in Hanford contamination

TRI-CITY HERALD
Tri-Cities, WA

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By Annette Cary
Herald staff writer

Fruit flies, possibly attracted to a sugary substance used to seal potentially radioactive areas, appear to be spreading contamination around offices and shops at Hanford.

Fluor Daniel Hanford officials had not yet figured out Tuesday how several spots in the 200 East Area had become contaminated, but believed flies, gnats and ants were making the problem worse.

"We're very concerned about this," said Ron Hanson, Fluor Daniel Hanford president. Finding the source of the radiation is going much slower than officials thought, he said.

"We will give it our full attention until we find the source."

About 10 acres with office buildings and trailers just south of B Plant have been roped off and closed to workers, Hanford officials announced Monday after spots of radioactive contamination were found there.

Nine spots were discovered in the roped-off area, and two more were found and cleaned up about five miles away in the 200 West Area.

Tuesday, the count rose to at least 13 contaminated spots after two more were found at the 200 East Area. One spot was inside a building and the other was just outside a second building.

In addition, wet garbage in bins and garbage cans tested positive for radiation Tuesday. Most were inside the closed-off 200 East Area, but at least one spot was in a trash can outside the boundaries.

Work on construction on a storage building for nuclear wastes at the site has been stopped temporarily because contamination was found in a trash can there. It measured roughly 1 millirad per hour, said Robert Shoup, vice president of environment, safety and health for Fluor Daniel Hanford Inc.

The worst spot found Tuesday was inside the roped-off area in wet garbage where flies and gnats had been. It measured 10 to 12 millirads per hour — about the same dose of radiation in a dental X-ray. It's also about the same as the potential radiation dose of the

largest contaminated spot found in the closed-off area before Tuesday, a spot about the size of a salad plate.

Some of the other contaminated spots were described by Hanford officials as specks. They could have been spread by insects, Shoup said.

Hanford officials are investigating whether part of the problem is that insects are attracted to a fixative. The mix is sprayed on areas that might be contaminated so no radioactive material gets in the air while workers are checking it.

Until two or three years ago, a fixative with an organic base was commonly used. But because it is not healthy to breathe, Hanford has begun using another fixative with a sugar base.

Hanford garbage trucks, garbage bins and other areas were being fumigated Tuesday to kill insects. Broader spraying is planned.

"We don't need Mother Nature helping" spread contamination, Shoup said.

Workers also are being told to wrap their trash before they throw it away and to keep lids on garbage cans.

Hanford officials have known since last week that there's a possibility contaminated trash may have been sent to the Richland landfill in a garbage truck that later was found to be contaminated. Since then, trash is kept at Hanford, where it's beginning to pile up.

The search for the potentially contaminated trash buried at the landfill continued Tuesday. Hanford workers slowly were shoveling layers of garbage, then sweeping the area for radioactivity throughout the day.

Hanford officials were concerned that in addition to contaminated trash, contaminated flies and gnats might have hitched a ride on the truck to the landfill. However, workers found no contamination Tuesday, but had not unearthed the bulk of the Hanford trash by evening.

Some 50 to 60 tons of trash has been moved, so far. The load dumped last week from the contaminated Hanford truck is believed to be an area about 200 feet by 200 feet.

Hanford workers have a good idea where most of the waste should be in the landfill, because city workers knew the load dumped on top of it was waste from a food processor. It's not all in tidy layers, however. The waste had been pushed together and compacted, mixing some of it together.

At Hanford, no workers are known to have received a dose of radiation from the contamination found in the 200 East Area. Forty have been given full-body checks to determine if they have ingested any radiation. Those checks came up clean, but all have requested bioassays. Those tests, done on body waste, can find exposure missed in the full-body checks.

An ironworker earlier found to have radiation on one boot and on four socks in his laundry hamper at home also has asked for the bioassay. Results will not be back for at least two weeks.

Fluor officials said Tuesday that small amounts of contamination were found not just on the worker's boot and socks, but also on the outside of his lunch bag and its contents. A tiny amount of radiation was detected on the lid of a plastic food container and the handle of a toothbrush, both of which were inside the plastic grocery store bag he used to carry his lunch.

Hanford officials had not confirmed what radioactive material was found in contaminated spots discovered Tuesday, but the 11 spots found by Monday all contained pure strontium 90, which gives a clue to its source.

Typically, strontium would be found mixed with cesium. The B Plant, where strontium and cesium were separated from tank wastes, is one of the places on site where pure strontium could be found.

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Hanford trash being removed from Richland

By Annette Cary
Herald staff writer

Radioactive apple cores and banana peels found Wednesday in the Richland city landfill are among 35 tons of Hanford trash scheduled to make a return trip to the nuclear site.

The trash is part of radioactive contamination Hanford officials believe is being spread around office and shop buildings on the nuclear reservation by flies dining on a sugary substance sprayed on areas contaminated by radiation years ago.

A continuing search of the landfill Wednesday morning turned up 10 items contaminated with radiation. Hanford officials said they were mostly wet garbage, such as apple cores, that would have attracted contaminated flies and gnats to garbage bins at Hanford.

All 35 tons — about three truckloads — are going to be taken back to Hanford.

Workers from the nuclear reservation have stopped digging at the city landfill and covered the trash with tarps to keep the gnats that flock to the garbage from becoming contaminated.

Hanford officials are waiting for a state Department of Health radiological construction permit that's required to do work when contaminated material is found. They expect it to be issued today or Friday.

Hanford employees have been going over a 40,000-square-foot area at the landfill since Monday with Geiger counters after radioactive contamination was found on a garbage truck.

Workers uncovered the bulk of the trash from that load by Wednesday, but Hanford officials are looking for trash dumped as long ago as Sept. 21, because contaminated apple peels turned up in a Hanford lunch room Sept. 22.

The most radioactive item found at the landfill had low-level contamination, giving off 2.5 millirads an hour. A chest X-ray gives a dose of 10 to 12 millirads.

But Hanford officials are taking the issue seriously. "Any contamination outside a controlled radiation area is unacceptable," said Robert Shoup, vice president of environment, safety and health for Fluor Daniel Hanford.

Hanford officials are concerned about contamination not just in the landfill, but also on the nuclear site, where radioactive materials have turned up in unexpected places and still may be being spread by insects.

However, no more contaminated places were found Wednesday at Hanford.

"We're starting to see some progress," said Ron Hanson, Fluor president. Hanford officials were spraying for flies Wednesday and planned to bring in fogging equipment today that can kill insects in larger areas.

Although no possible source for the contamination is being ruled out yet, officials are leaning toward the theory that more than a dozen spots of radioactive contamination around offices, shops and equipment were carried there by insects.

Most, if not all of the spots, are contaminated with strontium, which is usually found in radioactive waste mixed with cesium. However, the B Plant, just north of where most of the contamination was found was used to separate strontium and cesium from underground waste tanks.

The 10-acre area with most of the contamination has closed-off pipes that used to carry waste from the strontium and the cesium separation process. When workers need to get into those places for maintenance, they spray on a fixative that's made up mostly of the sugar glucose. It dries to a hard finish, keeping any radioactive contamination in place.

But before it dries — or if it gets wet again — it may be attracting flies and gnats that eat not just the sugar but also the contamination.

Hanford officials are trying to trace any recent work that may have required use of the sugary

TRI-CITY HERALD *A1*
Tri-Cities, WA **OCT 08 1998**

substance or that would have gotten wet the 200 East Area, where most of the contamination has been found.

In the meantime, Hanford has stopped using the fixative, said Jim Mecca, deputy assistant manager for facilities transition for the Richland DOE office. Before any work is done that requires waste to be fixed in place, another mixture will have to be found, he said.

The sugary mixture has only been used in the last few years at Hanford — replacing another fixative that was not as healthy for workers.

Contamination has been found in the 200 East Area in spots as small as a speck and as large as a salad plate. Much of it has been in wet garbage and the cans, bins and trucks that have held garbage. A 10-acre buffer zone has been roped off and closed to routine work.

The two largest spots of contamination found in the 200 East Area would have given a worker who sat close by for an hour about the same dose as a chest X-ray.

"We're fairly confident workers have not had their safety unduly compromised," Shoup said.

In Richland, parts of the landfill that don't contain recent Hanford waste remain open to the public. "No one is in danger," said Richland Mayor Larry Haler.

When the waste is removed, city officials will discuss changes in landfill procedures with Hanford officials, Haler said. The city is interested in more safeguards and oversight to prevent more contamination of the landfill.

This is the most serious of several incidents of potential landfill contamination in recent years. In one case, very slightly contaminated protective booties were found at the landfill, but Department of Energy officials said they did not come from Hanford.

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SPOKESMAN REVIEW
Spokane, WAB4
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Radiation bugging Hanford

Safety officials think insects may be contamination source

Associated Press

RICHLAND — Insects ranging from fruit flies to gnats and ants may be spreading radioactive contamination among offices and shops at the Hanford Nuclear Reservation.

Eleven spots in the 200 East Area and two in the 200 West Area five miles away have been contaminated. The source has not been determined, but bugs are believed to be part of the problem.

"We're very concerned about this," Ron Hanson, Fluor Daniel Hanford president, said Tuesday.

Finding the source of the radiation has taken longer than expected, he said, adding, "we will give it our full attention until we find the source."

No workers are believed to have received a dose of radiation from the contamination found in the 200 East Area. Forty have been given full-body checks, which came up clean.

All of them also requested bioas-

says — tests on body waste — which can find exposure missed in the full-body checks.

An ironworker earlier found to have radiation on one boot and on four socks in his laundry hamper at home also has asked for the bioassay. Results will not be back for at least two weeks.

About 10 acres with office buildings and trailers have been closed to workers because of spot contamination.

Additionally, wet garbage in bins and garbage cans tested positive for radiation Tuesday. Most were inside the closed-off 200 East Area, but at least one spot was in a trash can outside the boundaries.

The worst spot found Tuesday was inside the roped-off area in wet garbage where flies and gnats had been. It measured 10 to 12 millirads per hour — about the same dose of radiation in a dental X-ray.

Construction of a storage building for nuclear waste at the site has been stopped temporarily because contamination was found in a trash can

there. It measured roughly 1 millirad per hour, said Robert Shoup, vice president of environment, safety and health for Fluor Daniel Hanford, the reservation's prime contractor.

Some of the contaminated spots are just specks and could have been spread by insects, Shoup said.

Hanford officials have not confirmed what radioactive material was found in contaminated spots discovered Tuesday, but at least 11 spots so far have contained pure strontium 90.

Also under investigation is whether part of the problem is that insects are attracted to a fixative with a sugar base that is being sprayed in some places to prevent radioactive material from getting into the air.

Until two or three years ago, a fixative with a different chemical base was commonly used, but it was not healthy to breathe, so Hanford switched to the sugar-based fixative.

Hanford garbage trucks, garbage bins and other areas are being fumigated to kill insects. Broader spraying is planned.

Hanford hot spots blamed on radioactive bugs

SEATTLE POST-INTELLIGENCER
Seattle, WAH1
OCT 08 1998

PI STAFF and NEWS SERVICES

RICHLAND — Hollywood might call it "The Invasion of the Atomic Fruit Flies."

Hot spots of radioactive contamination have turned up in unexpected places on the Hanford Nuclear Reservation in Eastern Washington. And experts theorize that fruit flies, gnats and ants may be the culprits — spreading radioactive contamination in offices and shops.

Radioactive material has turned up in garbage — perhaps spread by grazing bugs. Some of the garbage ended up in the Richland city landfill.

And an ironworker at the reservation found radioactive socks in his home laundry hamper.

So far, 11 hot spots in an area in the middle of the reservation have been found. Two other radioactive spots were found five miles away at another area. Both spots are in the areas of the greatest concentration of nuclear waste.

State health officials said the bugs pose no health threat to the general public. "They're not that radioactive," said Al Conklin, manager of air emissions and defense wastes for the state Health Department. "There are some hot little bugs, but it shouldn't be an off-site problem."

A gooey substance used at the reservation may be attracting the bugs. The substance, a fixative used to keep radioactive dust from being blown in the area, is sugar-based. Gnats and fruit flies seem to enjoy snacking on it.

The company in charge of cleaning up Hanford's nuclear waste is taking the possibility of hot bugs seriously.

"We're very concerned about this," Ron Hanson, Fluor Daniel Hanford president, said Tuesday.

"We will give it our full attention until we find the source."

Forty employees have been given full-

body checks, which came up clean.

All of them also requested bioassays — tests on body waste — which can find exposure missed in the full-body checks.

The ironworker who was found to have radiation on one boot and on four socks in his laundry hamper at home also has asked for the bioassay. Results will not be back for at least two weeks.

About 10 acres with office buildings and trailers have been closed to workers because of spot contamination.

Additionally, wet garbage in bins and garbage cans tested positive for radiation Tuesday. Most were inside a closed-off area, but at least one spot was in a trash can outside the boundaries.

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Construction of a storage building for nuclear waste at the site has been stopped temporarily because contamination was found in a trash can there. It measured roughly 1 millirad per hour, said Robert Shoup, vice president of environment, safety and health for Fluor Daniel Hanford.

Some of the contaminated spots are just specks and could have been spread by insects, Shoup said.

State health officials told contractors to find possible sources of radioactivity that may be contaminating bugs and eliminate them.

One such area is a pit containing high-level waste lines. Health officials

ordered the pit cover to be sealed with tape yesterday so that bugs could not get into it, Conklin said.

Hanford garbage trucks, garbage bins and other areas are being fumigated to kill insects. Broader spraying is planned.

Workers also have been told to wrap their trash before they throw it away and to keep lids on garbage cans.

Some contaminated trash was sent to the Richland landfill. The garbage, mostly paper and food waste, was only slightly contaminated, said Stan Arlt, Richland's director of engineering and utility services.

"The amount of radiation is so slight," he said. "It's no threat to the public."

Bugs at the landfill should not be a problem, Arlt said, since garbage is regularly covered with dirt.

Richland wants transfer station built at Hanford

TRI-CITY HERALD
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By Chris Mulick
Herald staff writer

The radioactive contamination discovered in Hanford garbage might have been detected before the refuse was dumped had a transfer station been built at the Richland landfill.

But Richland, which has been collecting money to build the facility for three years, now wants its contract with the Department of Energy changed so the \$500,000 building can be constructed at Hanford — at more expense to DOE.

The 1995 contract between DOE and the city for garbage dumping required the city to build a transfer facility at the landfill where waste would be monitored. DOE has been paying \$43.29 per ton of garbage — 2½ times what commercial customers in Richland pay — to cover the cost of the building.

In the first three years of the 10-year contract, DOE has paid Richland at least \$1.3 million to dump its garbage. The transfer station, had construction plans not been stopped, would have been completed sometime last year, said Stan Arlt, Richland's engineering and utility services director.

Arlt said there is a new sense of urgency to build the facility after last week's discovery that 35 tons of Hanford garbage containing low-level contamination had been dumped in the landfill. After being mixed with other garbage, as much as 100 tons may now be contaminated and will be removed from the landfill.

But Arlt said the city now feels the transfer station should be at Hanford, rather than at the landfill. And he says the city wouldn't foot the bill.

Instead of building the transfer station with money collected so far, the city has used the money to buy a larger trash compactor and a new front loader that were needed partly because of the Hanford trash, Arlt said.

The city also used some of the money to have city workers examine Hanford's garbage more closely.

Arlt said the contract with DOE doesn't specify how the money should be spent to better handle Hanford's garbage. The design phase of the project already has been completed at a cost of \$50,000.

If the contract was left unchanged, it eventually would generate enough money to build the station, he said. However, it now appears DOE and the city will amend the contract.

DOE had been wondering about the progress of the transfer station.

Contaminated waste exhumed at landfill

By the Herald staff

Hanford workers dug up 35 tons of waste contaminated with low-level radiation Friday at the Richland city landfill.

They may have to take out 100 tons to make sure no contaminated trash from the nuclear reservation remains at the landfill, Hanford officials said Friday. The trash was dumped there after Sept. 21 and before officials knew flies and gnats were spreading radioactive contamination around offices and shops in the 200 East Area.

A total of 35 tons of trash with spots of contamination — such as banana peels and apple cores — was taken to the city landfill. But because it had already been compacted and covered, it's become mixed with other waste that will also be dug up.

The trash will be taken back to the Hanford low-level waste burial grounds.

No new contamination was found Friday at Hanford, except in a 10-acre area south of B Plant that's been roped off and closed to routine work.

"There's no evidence contamination is spreading," said Robert Shoup, vice president of environment, safety and health for Fluor Daniel Hanford. "We think we have things contained."

The only worker known to have come in direct contact with the waste has received results of a bioassay, which were negative for radiation. After spots of radiation turned up on the ironworker's boot and the handle of a toothbrush in his lunch sack, a search of his home laundry hamper turned up four socks contaminated with small amounts of radiation.

Hanford officials are not sure where flies and gnats were picking up the radiation, but they've been looking at a valve box that controlled an underground piping system carrying waste from B Plant years ago. The box is usually sealed up but was reopened several weeks ago for maintenance.

A check of the box has shown it is contaminated with strontium — the same type of waste that's been spread by flies. Flies trapped there were contaminated with radiation.

"If the transfer station were not to be built, we would be seeking (a new rate)," said Jim Mecca, DOE's assistant manager for facility transition. "Why the facility hasn't been built is a question that has to be answered by the city."

Mecca agreed it's likely the station will be built at Hanford because it is a better location.

Once the facility is built, it would mark a big change in how Hanford's garbage is dealt with.

"We have not dumped garbage on a concrete pad and looked at every apple core and banana peel, which is probably the way we're going to have to go in the future," Mecca said.

Mecca said it isn't known yet how much it will cost to inspect Hanford's garbage so thoroughly. He envisions garbage being placed on a conveyor belt that would run past radiation detectors.

"It can be made to be efficient," he said.

He hopes a new agreement can be reached in time to resume garbage dumping in Richland as soon as the week of Oct. 19. Garbage will stack up at Hanford until then.

Hanford workers began moving Hanford garbage from the landfill back to the nuclear site on Friday. All the garbage could be back at Hanford early next week, Arlt said.

Reporter Chris Mulick can be reached at 582-1521 or via e-mail at cmulick@tri-cityherald.com

TRI-CITY HERALD ^{A3}
Tri-Cities, OCT 13 1998

Hanford works to trap contaminated bugs

By John Stang
Herald staff writer

Hanford's contaminated trash has been removed from Richland's landfill.

And now, efforts are increasing to lure and trap the tiny contaminated bugs that are flying around a 10-acre area near central Hanford's B Plant.

"We believe this episode is winding down to a successful conclusion," Bob Shoup, Fluor Daniel Hanford's vice president for environment, safety and health, said Monday.

Stan Arlt, Richland's engineering and utility services director, said, "It looks like all the contaminated garbage that we are aware of should be out by close of business today."

In the past few days, Hanford has taken 14 truckloads of contaminated and suspected contaminated trash — a total of 168 to 210 tons — from the Richland landfill to a low-level radioactive waste site in central Hanford.

The work is in response to numerous, slightly contaminated spots found near B Plant, including in a trash bin, in a garbage truck and in trash found at the landfill.

Hanford officials believe fruit flies, gnats and other "flying pests" are spreading the strontium contamination from the B Plant area.

Hanford believes one source of the contamination is a valve box for an underground pipe system that carried wastes from B Plant years ago, Shoup said. But he said other potential sources have not been ruled out.

The Department of Energy and the city likely will begin discussing today whether

DOE should build a transfer station at Hanford to screen waste for contamination before it goes to the landfill, Arlt said.

Arlt hopes those talks will be completed by the end of the week.

Meanwhile, Hanford is stepping up efforts to catch the contaminated insects.

About 200 other traps are being scattered around Hanford outside of the 10-acre site. The only contaminated insects have been found within the 10-acre site, Shoup said.

And since last week, technicians have been going through the 10-acre site shoulder-to-shoulder with radiation counters to hunt for contaminated spots and insects. That surveying will be increased this week, Shoup said.

Until now, the top priorities were to tackle the landfill and to check workers for contamination, he said.

One worker who came in contact with the waste was checked by urinalysis, which showed no contamination.

Hanford checked 32 employees who work in the area with a whole body counter, which scanned their bodies for contamination, but found no contamination.

Also, 34 workers were given urinalysis kits, which were negative, Shoup said.

Another group of employees who worked around the valve box will be asked to undergo urinalysis. This is a voluntary procedure, but Shoup said no one has refused to be tested.

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ARIZONA
REPUBLIC

Insects spread radiation on nuclear reservation

Associated Press

RICHLAND, Wash. — Insects ranging from fruit flies to gnats and ants may be spreading radioactive contamination among offices and shops at the Hanford nuclear reservation.

Thirteen spots on the reservation have been contaminated. The source has not been determined, but bugs are believed to be part of the problem.

"We're very concerned about this," Ron Hanson, Fluor Daniel Hanford president, said last week. He said finding the source of the radiation has taken longer than expected.

No workers are believed to have received a dose of radiation from the contamination. An ironworker

was found to have radiation on a boot and socks in his laundry hamper at home.

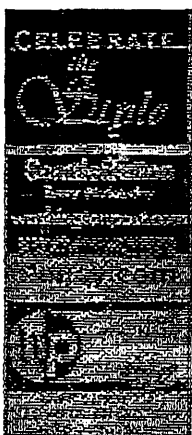
About 10 acres with office buildings and trailers have been closed to workers because of spot contamination.

Additionally, wet garbage in bins and garbage cans tested positive for radiation last week. The worst spot found was in wet garbage where flies and gnats had been. It measured 10 to 12 millirads per hour — about the same dose of radiation in a dental X-ray.

Hanford for more than 40 years made plutonium for nuclear weapons. The 560-square-mile reservation now contains the nation's largest volume of radioactive waste from nuclear weapons.

Radioactive Bugs Found at Nuke Site

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Radioactive Bugs Found at Nuke Site

By Linda Ashton
 Associated Press Writer
 Wednesday, October 21, 1998; 4:30 p.m. EDT

RICHLAND, Wash. (AP) -- Radioactive ants, flies and gnats have been found at the Hanford nuclear complex, bringing to mind those Cold War-era B horror movies in which giant, mutant insects are the awful price paid for mankind's entry into the Atomic Age.

Officials at the nation's most contaminated nuclear site insist there is no danger of Hanford becoming the setting for a '90s version of "Them!", the 1954 movie starring James Arness and James Whitmore in which huge, marauding ants are spawned by nuclear experiments in the desert.

Although Hanford is working to eradicate its "hot" insects, officials said the radioactivity the pests carry is slight and no threat to neighboring communities.

"We're not dealing with an insect that would leave and all of a sudden start to give birth to these malformed, horrible insects," said a chuckling Richard Zack, an entomologist at Washington State University in Pullman.

The situation came to light in September when red harvester ants found underground near some old waste pipes were discovered to be radioactive. Then, earlier this month, workers discovered radioactive flying insects around cans where the staff's day-to-day nonradioactive garbage is thrown away.

That led Fluor Daniel Hanford, the company that manages Hanford for the Energy Department, to check the town dump where Hanford garbage is taken. Workers found trash that had apparently become radioactive from contact with the bugs, and sent 210 tons of it back to Hanford for burial.

Still, a person would have had to stand next to a spot contaminated by radioactive bugs for an hour to get the level of exposure equal to a dental X-ray, said Mike Berriochoa, spokesman for Fluor Daniel Hanford.

And the house-size ants of "Them!" are "physical impossibilities" and just the stuff of science fiction, Zack said.

Zack and Berriochoa said they are not aware of any pattern of genetic mutation in the insects around Hanford. And if the insects were to develop mutations, the abnormalities would be along the lines of a short antenna or an extra leg, Zack said.

Radioactive Bugs Found at Nuke Site

<http://search.washingtonpost.com/w...O/19981021/V000764-102198-idx.html>

And because the insects' range is short -- for fruit flies, it's a few hundred yards to a half-mile -- the chances of their leaving the 560-square-mile complex are slim, he said.

Hanford said radioactive pests are to be expected at a place that produced 40 years' worth of plutonium for the nation's nuclear weapons, including the bomb dropped on Nagasaki, Japan, in 1945.

With all manner of burrowing creatures in the desert, including mice, rabbits and snakes, there's always the potential something will get contaminated, Berriochoa said. When contaminated mouse or rabbit droppings are found at Hanford, traps are set for the animal, and it is destroyed.

Hanford stopped producing plutonium at Hanford in the 1980s, but some areas remain highly radioactive. Billions of dollars are being spent to clean up the site along the Columbia River.

Julie Petersen, 22, who works at Sunburst Video in Richland, does not spend a lot of time worrying about mutant bugs.

"I'm sure I get more radioactivity from my microwave," said Ms. Petersen, whose friends outside the area still ask her if she glows. "It's just something we deal with every day. It's the way most people live."

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TRI-CITY HERALD
Tri-Cities, WAA8
OCT 22 1998

More Hanford workers tested for exposure to radioactivity carried by fruit flies, gnats

By John Stang
Herald staff writer

Hanford has checked 104 people for possible exposure to specks of radioactive contaminants believed to be spread by fruit flies and gnats.

That is almost double the 55 that had taken urinalysis tests as of last week.

"They decided to go for every person who could have been exposed," said Fluor Daniel spokeswoman Michele Gerber.

Most of the new people tested were truck drivers.

So far, test results on 62 people have been returned. One person showed a borderline positive reading and has been retested. The result of the new test has not been returned yet, Gerber said.

Meanwhile, Hanford recently opened up a previously roped-off 10-acre area by B Plant that was the main focus for hunting for contaminated insects.

Several trailers and "Conex" buildings — metal storage boxes big enough to walk into — in that area still are off limits awaiting checks by Hanford workers.

Starting in late September, insects apparently have left small spots of strontium contamination — no more than the dose from a dental X-ray — in trash cans and Dumpsters, in at least one garbage truck and in Richland's landfill.

One source of the contamination is likely a valve box for an underground pipe system that carried wastes from B Plant years ago.

But other sources have not been ruled out. The flies and gnats are

believed to have been attracted to a sugary substance used as a sealant in that area.

The suspected areas have been sprayed heavily with insecticides.

The last contaminated fly was found in the valve box Oct. 15, with the last contaminated fly found elsewhere Oct. 8.

Meanwhile, the Department of Energy and the city of Richland still are discussing how Hanford's trash should be inspected before it leaves the site for Richland's landfill, said Gerber and Stan Arlt, the city's engineering and utility services director.

Until those talks are done, Hanford is burying its trash on site.

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TRI-CITY HERALD *A2*
Tri-Cities, WA **NOV 03 1998**

Two more contaminated flies found miles from suspected Hanford origin

By John Stang
Herald staff writer

Two contaminated flies were found Friday in a trap next to a US Ecology trash bin at central Hanford.

The Dumpster is two to three miles from Hanford's B Plant area — making the trap site the farthest contaminated insects have been found from the suspected origin of the site's other contaminated flies and gnats.

It also puts the flies next to a Dumpster whose contents go to a waste transfer station in Pasco and then to the Rabanco regional landfill in Roosevelt.

However, the Dumpster has been surveyed, and no contamination has been found in it so far, said Debra McBaugh, manager of the environmental radiation section for the Washington Department of Health.

The amount of contamination found on the two flies poses no health risk, she said.

The incident is the latest development as Hanford tries to keep flies and gnats from spreading spots of slightly radioactive contamination.

The problem began in late September. Trash from the B Plant area was routinely sent to Richland's landfill — then it was found to contain small spots of radioactive contamination.

Followup searches found spots of strontium contamination scattered in the B Plant area. Insects are the suspected carriers.

One suspected origin of the contamination is a valve box near B Plant.

The federal site's lead contractor, Fluor Daniel Hanford, is trying to

determine if other potential sources exist.

Numerous insect traps are scattered in central Hanford. And until Friday, the last contaminated fly was trapped Oct. 8.

But three new contaminated spots were found last week in two insect traps and one Dumpster near B Plant, according to a Hanford memo to all employees.

Then 50 flies were found Friday in a trap about two feet from the US Ecology Dumpster. Two of those 50 were contaminated, McBaugh said.

Much of Hanford's trash normally is shipped to the Richland landfill.

But that trash now is kept and buried at Hanford until Richland and the Department of Energy work out procedures for reopening the city landfill to the site.

But Pasco-based Basin Disposal Inc. hauls some Hanford-area trash, including US Ecology's, to its waste transfer station before sending it to Roosevelt. Information on the size of Basin Disposal's portion was unavailable Monday.

When the contamination first showed up in Richland's landfill, Hanford contacted Basin Disposal, said Darrick Dietrich, a company official.

Hanford technicians began routinely surveying Basin Disposal's Dumpsters — and other items on a "case-by-case basis," he said. No contamination had been found on Basin Disposal items. The one US Ecology site Dumpster had been surveyed twice before Friday, Dietrich said.

Meanwhile, Hanford technicians checked the trap next to US Ecology's Dumpster last Wednesday and found no contaminated flies, McBaugh said.

Basin Disposal picked up trash

from that Dumpster Thursday. The contaminated flies were found near the Dumpster on Friday.

Fluor Daniel is not sure if B Plant or other Hanford operations are the source of contamination for the two flies — or if the source is US Ecology's site, said Fluor spokeswoman Michele Gerber. US Ecology is a commercial operation with no link to anything managed by Fluor.

The flies are being analyzed to determine where they picked up the contamination. If it's from strontium, it would be linked to the B Plant area.

"If it's determined it's our problem, we'll get more involved," Gerber said.

Tom Hayes, manager of US Ecology's site, believes the flies did not pick up the contamination at the commercial site. All of its radioactive materials are sealed in barrels and buried.

"We've got years and years of surveys that show there's no loose radioactivity here. We're confident it came from elsewhere," Hayes said.

McBaugh said the state suspects the contamination is connected to the B Plant area.

Meanwhile, Hanford continues to analyze urinalysis samples from 106 people who may have been exposed to the contamination. Results from 65 tests have been returned, and all showed no exposure, Gerber said.

The 65 negative test results include one person who tested borderline positive on an earlier test — and was rechecked.

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Contaminated fly found near trash bin came from B Plant

TRI-CITY HERALD *A4*
Tri-Cities, WA NOV 05 1998

By the Herald staff

Hanford experts have confirmed that a contaminated fruit fly found last week next to a US Ecology trash bin came from the B Plant area.

Only one fly — not two as earlier thought — was contaminated out of 50 found Friday in a trap a couple of feet from the Dumpster, said Bob Shoup, Fluor Daniel Hanford's vice president for environment, safety and health.

The trash bin is 1 1/4 miles from central Hanford's B Plant area — making this the farthest that contaminated insects have been found from the other contaminated files and gnats.

Fruit flies usually stick in one area, but a good wind apparently wafted this fly to the US Ecology area, Shoup said.

The fly was tainted with strontium and cesium, which links it to the B Plant area where those radioactive substances are stored.

No evidence has been found that the bin or the Basin Disposal Inc. truck serving it were contaminated, Shoup said.

One more contaminated spot was found Tuesday in a garbage can near the Canister Storage Building — Hanford's new underground spent fuel vault. But the contamination was so slight the spot appears to be an old one, Shoup said.

Meanwhile, Hanford continues to analyze urinalysis samples from 106 people who may have been exposed to the contamination. Results from 65 tests have been returned — and all showed no exposure.

Hanford digs up backup landfill, collector

TRI-CITY HERALD
Tri-Cities, WA

A3
NOV 13 1998

By John Stang
Herald staff writer

Hanford now has a backup trash collector and alternative landfill to use in case Richland permanently stops taking Hanford waste.

Richland has refused to accept any more Hanford garbage until Hanford officials figure out how to deal with small amounts of radioactivity showing up in its trash.

The suspected cause is slightly radioactive insects buzzing around part of the Hanford site.

Pasco-based Basin Disposal Inc., which hauls trash from the Tri-Cities to the regional landfill at Roosevelt, signed a one-year agreement Wednesday to begin hauling Hanford's garbage.

Hanford officials hope to work out an agreement with Richland too so the site has two garbage haulers, but the matter is still unresolved.

"It's going to need more massaging," said Roger Wright, the city's environmental engineer.

Much of Hanford's trash normally is shipped to the Richland landfill. But that trash now is kept and buried in a low-level radioactive waste trench at Hanford until Richland and the Department of Energy resolve the concerns.

Also this week:

■ While conducting its first random survey of trash at the site Thursday, Hanford workers found a mysterious and slightly radioactive plastic bag of dry granules. It is not known what the granules are.

■ Two more dead contaminated flies were discovered in an ironworkers' shop in the 200 East Area near B Plant.

■ Hanford continued to analyze urine samples from 106 people who may have been exposed to the contamination. Results from 95 tests have been returned, and all showed no exposure.

The problem began in late September, when trash routinely sent to the Richland landfill from the B Plant area was found to contain small spots of radioactive contamination.

Officials suspected the contamination was being spread around office and shop buildings by flies and gnats dining on a sugary substance sprayed to prevent the spread of radiation from contaminated areas.

Then, radioactive apple cores and banana peels were found in the landfill among 35 tons of Hanford trash sent there since Sept. 21.

However, the most radioactive item at the landfill had low-level contamination, giving off 2.5 millirads an hour. A chest X-ray gives a dose of 10 to 12 millirads.

Still, city officials closed the dump to Hanford garbage until the contamination problems were investigated further.

But until the issue is resolved, it's costing 10 to 50 times as much to bury the waste at Hanford as in a regular landfill, Mecca said.

That's because normal office trash has to be handled and buried like it's low-level radioactive waste. Hanford produces five to six tons of trash a day.

The agreement with Basin Disposal has DOE paying \$33 to \$35 a ton to take the wastes to a Pasco transfer station and then to a regional landfill in Roosevelt. The fee at Richland's landfill is \$43.29 a ton.

The current situation shows that "good business practices" call for having two trash hauling systems at Hanford, said Jim Mecca, DOE's deputy assistant manager for facilities transition.

Mecca said Basin Disposal's exact long-term role will be re-evaluated after talks are done with Richland. DynCorp Tri-Cities Services is the subcontractor in charge of Hanford's utilities.

Leonard Dietrich, owner of Basin Disposals, said DOE needs to look at its past practice of hauling trash to Richland's landfill. The Roosevelt facility has extra safeguards, including an underground protective barrier of two plastic liners with a layer of impermeable clay between them — protections that are absent in Richland.

Any leaks leading to environmental cleanup could leave DOE as a potentially liable party, Dietrich said.

Still, Wright said Richland's unlined landfill complies with all the appropriate laws because it is in an arid area with less than 12 inches of annual rainfall.

Meanwhile, Fluor is setting up a system of dividing its trash into four categories to be checked for different levels of contamination. For example, trash from office buildings would be in the least risky category. Trash from the Plutonium Finishing Plant would be in the category of highest risk of being tainted.

The new system includes spreading out random loads of trash in a metal building and checking for contamination, said Bob Shoup, Fluor's vice president for environmental safety and health.

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TRI-CITY HERALD
Tri-Cities, WA NOV 14 1998

Radioactive reading in trash tied to potassium 40 in bag

By the Herald staff

Naturally occurring potassium 40 triggered the radioactive readings discovered Thursday in a bag of granules at a Hanford trash survey station.

The potassium 40 isotope was part of a salt mixture used to de-ice sidewalks, Bob Shoup, Fluor Daniel Hanford vice president for environmental safety and health, said Friday.

The granules were in a load of trash sent to a new survey station in Hanford's 400 Area.

Thursday was the first day Hanford began doing random surveys of trash going off site to make sure nothing contaminated is leaving the reservation.

That survey found a half-gallon of slightly radioactive dry granules in a plastic bag—later determined to be potassium 40 in a deicing mixture.

The average Mid-Columbia resident absorbs a radiation dose of about 360 millirem a year. The rough breakdown is 200 millirem from naturally occurring radon, 100 millirem from cosmic sources, 40 millirem from dental and medical x-rays and 20 millirem from naturally occurring potassium 40, Shoup said.

The amount of potassium 40 discovered in the bag would translate to significantly less than the naturally occurring annual dose of 20 millirem, he said.

Richland, DOE reach deal on dumping

TRI-CITY HERALD
Tri-Cities, WA DEC 06 1998

By Chris Mulick
Herald staff writer

Hanford's garbage could be back on its way to the Richland landfill as soon as Dec. 14.

In late September, city officials were notified that some Hanford garbage sent to Richland's landfill had been tainted with radioactive contamination. Since then, some of Hanford's garbage has been dumped on the nuclear reservation and some has been hauled to a site in Roosevelt.

But the Department of Energy and the city have reached an agreement that could resume dumping at the Richland landfill for the first time in more than two months.

If the Richland City Council approves the

memorandum of agreement Monday night, dumping will resume Dec. 14, said Richland Deputy City Manager Don Carter.

The agreement contains several elements.

■ All Hanford garbage will be inspected for 30 days to help devise a plan to categorize different types of refuse.

■ After 30 days, garbage from areas more likely to be tainted with radioactive contamination will be inspected at a transfer station at the Hanford site. Garbage less likely to be contaminated will be inspected at random.

■ Richland retains rights to monitor the inspection process and will have to approve any cleanup plans should more contaminated garbage be dumped into its landfill.

To further its oversight, Richland also will

hire radiological experts to watch over the inspection activities. That will cost DOE \$100,000 next year in garbage rates.

The agreement will require the DOE contract with Richland to be changed. Originally, a \$500,000 transfer station was set to be built in Richland. DOE has been paying \$43.29 per ton of garbage — 2½ times what commercial customers pay — in part to cover the costs of the building.

But Richland has used the money to buy a larger trash compactor and a new front loader that were needed partly because of the Hanford trash, said Stan Arlt, the city's director of Engineering and Utility Services.

Had the 10-year contract remain unchanged, it would have eventually produced enough money to build the station. The city and DOE hope to amend that contract by Dec. 28. The problem began when flies and gnats began spreading contamination from a radioactive pit to food items and waste bins. Then, radioactive apple cores and banana peels began to turn up among 35 tons of garbage dumped at the Richland landfill.

Last month, DOE signed an agreement with Pasco-based Basin Disposal Inc., which hauls garbage from the Tri-Cities to the regional landfill at Roosevelt, as an interim solution before garbage could once again be dumped in Richland.

■ Reporter Chris Mulick can be reached at 582-1521 or via e-mail at cmulick@tri-cityherald.com

Hanford to resume dumping in Richland

By Chris Mulick
Herald staff writer

Hanford garbage again will be dumped in Richland, but probably not until January.

That's because the Department of Energy and the city still have to hammer out changes to their contract in the wake of the 35 tons of garbage contaminated with radiation that was dumped in the Richland landfill in September.

The low-level radiation—less than a chest X-ray—was spread from contaminated areas by gnats and flies to food trash items and waste bins.

Since then, Hanford garbage has been dumped either in low-level waste trenches or trucked to a landfill in Roosevelt.

Late Monday, the Richland City Council approved an agreement to allow dumping to resume. The agreement requires DOE to build a transfer station on the nuclear reservation to inspect garbage at highest risk of being contaminated.

"We really shouldn't let anything leave Hanford that is contaminated," Jim Mecca, the DOE's assistant manager for facility transition.

All of Hanford's garbage now is being checked inside an empty warehouse at the Fuel Materials Examination Facility.

That includes all of Hanford's garbage, even from facilities that don't generate radiation such as the Hazardous Materials Management and Emergency Response training center, also known as HAMMER.

"For the moment, it fits the bill," Mecca said of the makeshift transfer station.

The DOE is developing guidelines to classify different types of garbage. After two more weeks of inspecting all Hanford refuse, garbage from lower risk sites will be checked only periodically.

TRI-CITY HERALD
Tri-Cities, WA **DEC 09 1998**

All of Hanford's trash bins from lower risk areas will be checked about once a year, Mecca said.

Richland also plans to spend \$100,000 next year to hire a contractor to oversee the inspection process.

"We'll provide oversight to make sure it fits our needs," said Stan Arlt, the city's director of Engineering and Utility Services.

One thing DOE doesn't plan to do is pay the same garbage rate. Their contract calls for them to pay \$43.29 per ton—2.5 times the commercial rate. That was supposed to cover the costs of building a transfer station at the landfill.

Instead, the city spent the money on a new front-loader and a larger trash compactor, partly because of the Hanford garbage.

The contract also guaranteed the city would be paid for at least 10,000 tons of garbage a year. Instead, Hanford has averaged about 2,000 tons and has been paying for garbage it hasn't dumped.

"We have not come anywhere close to 10,000 tons," Mecca said. "I can't justify giving them that kind of money."

DOE and Richland hope to renegotiate their contract by Dec. 28.

Though the new plan may cut down on contaminated garbage dumped in the landfill, no one is promising tainted refuse will never be brought there again.

"You can never guarantee 100 percent there will never be a risk," Arlt said. "We'll lower the risk as low as we possibly can."

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HANFORD

REACH

A publication of the U.S. Department of Energy's Richland Operations Office for all site employees

OCTOBER 19, 1998

All-out effort stems spread of contamination

Michele Gerber

Fluor Daniel Hanford

The spread of low-level contamination outside radiation control zones on the Hanford Site and in the Richland City Landfill continued to make news last week, but a massive effort to understand and control the spread began to pay off.

Additional contamination was found in food waste in Hanford's trash at the city landfill. Once again, the contamination was low-level, beta-emitting, and principally from strontium-90. Excavation at the landfill was completed late Monday, and more than 200 tons of solid waste was boxed, returned to the Hanford Site and placed in low-level waste burial grounds in the 200 West Area.

On Tuesday, Hanford workers replaced and capped the solid waste in the city landfill that was disturbed in the excavation of Hanford trash. If city and site officials determine there is any possibility that more contamination could exist in the landfill, a "geo-probe" will be used to test areas before they are disturbed.



Dan Brush, left, and Dave Phipps, Fluor Daniel Hanford health physics technicians assigned to DynCorp Tri-Cities Services, survey and remove contaminated waste from the Richland City Landfill.

Continued on next page

Meetings are being held with city officials to establish a path forward for resuming garbage disposal in the city landfill.

“While we believe the contaminated solid waste episode we have just experienced is winding down to a successful conclusion, we will not be satisfied until the City of Richland tells us that it is satisfied,” said Jim Mecca of DOE Richland, Bob Shoup of Fluor Daniel Hanford and Bob Frix of DynCorp Tri-Cities Services in a joint message to Hanford employees.

“The city is engaged in many active and farsighted pursuits on behalf of citizens. It is deeply committed to selective industrial recruitment and business development,” the message stated. “We support and applaud the City of Richland in those efforts, and we are committed to doing everything we can to preserve a civic image that is conducive to economic growth.”

Mecca is deputy assistant manager for Transition Projects with the DOE Richland Operations Office. Shoup is vice president for Environment, Safety, Health and Quality for FDH, and Bob Frix is president and general manager of DynCorp Tri-Cities Services.

Flies contained

In perhaps the most positive discovery of the week, Hanford’s integrated action team confirmed that no contaminated flies or gnats had been found outside the 10-acre area south of B Plant where they were first discovered. The finding reinforced the belief that the insects were confined to a relatively small, isolated area 40 kilometers (25 miles) north of the Tri-Cities, and that no fruit crops in the region had been affected.

About a hundred fly traps shaped like large mayonnaise jars were baited with pieces of fruit and taken out of service as soon as they captured a significant number of insects. They consisted of 12 sets of traps around various border and interior areas of the Hanford Site, as well as a cluster of six traps at the Richland City Landfill. The levels of contamination

found on the traps varied from less than 5,000 to about 400,000 disintegrations per minute (dpm).

Of the 11 traps in the 10-acre area that is roped off south of B Plant, only four captured contaminated flies, and no traps outside that area yielded contaminated flies.

Radiological control

Fogging with malathion in the affected area continued after hours and on weekends, and surveying of site dumpsters continues. Two additional contaminated dumpsters were found Oct. 12 near the PUREX plant and the AW Tank Farm just southeast of the closed-off area. Those dumpsters had contaminated spots reading 10,000 dpm and 40,000 dpm.

At press time Thursday, 23 contaminated spots had been found—many on dumpsters—and the waste was taken to site burial grounds. Within the dumpsters, the contamination was found mostly on food waste, while a few spots were fixed contamination.

Levels of radioactivity on the food, the dumpsters and some locations in and near trailers just south of B Plant varied from 10,000 to 700,000 dpm, and consisted of beta-emitting radioactivity mostly comprising strontium-90. Shoulder-to-shoulder surveys by radiological control technicians also were conducted across the 10-acre affected area in an effort to shrink the area and hone in on the contamination source.

Bioassays have been extended to nuclear operators and radiological control technicians who worked in the 241-ER-152 diversion box in late September. Bioassays on workers have shown no uptake of radioactivity. Stations where workers can obtain personal surveys were reported in electronic messages to employees, and are listed below.

Solid waste team

The Solid Waste sub-team of the integrated action team continued efforts last week to contact any vendors or other persons who may have been in the af-

ected area south of B Plant in recent weeks. On-site trash is being collected and taken to the low-level burial grounds in 200 West. A new state permit allows a total of 50 loads of trash to be taken there.

“Disposal in burial grounds is not an ideal solution long-term, because it is expensive and it takes up valuable space needed for Hanford’s cleanup mission,” said Mecca, Shoup and Frix in an all-employee message. “For this reason, the team continues to plan for trash-surveying methods that will be acceptable to the City of Richland, so that we can resume site solid waste disposal in the city landfill.”

Health and safety

The three Hanford officials directing the action team emphasized that they “remain committed to the principles with which we began this investigation. Foremost among those commitments is the fact that the health and safety of our employees, and of the citizens of the region surrounding the Hanford Site, come first.

“No contamination outside of radiation control zones is acceptable, and we have zero tolerance for any contamination spreads. We will continue to investigate the source or sources of contamination, and we will work until all contamination is controlled and confined.

“We value our partnership with the city of Richland, and we want to be sure that this episode concludes in a manner that satisfies the city and allows us to share a positive future.” ■

HANFORD

REACH

A publication of the U.S. Department of Energy's Richland Operations Office for all site employees

OCTOBER 26, 1998

Contamination spread episode winding down

Michele Gerber

Fluor Daniel Hanford

Hanford Site officials closely monitoring the recent contamination spreads outside radiation control areas are optimistic that the situation is under control.

"Our main concern has always been providing a safe and healthy environment for workers, site visitors and vendors, and the public," said Bob Shoup, vice president of Environment, Safety, Health and Quality with Fluor Daniel Hanford. Shoup led the integrated team that directed the activities of three teams specially formed to respond when the contamination spreads were first detected in late September. A special "situation room" dedicated to the response effort was deactivated as of Oct. 15, although the teams continue to function.

While multiple traps for flying insects remain in place throughout the site, the traps in areas around the site have demonstrated no contaminated flies or gnats since Oct. 8. Contaminated flies were found only in the 10-acre radiological buffer area just south of B Plant. But contaminated flies have been found as recently as Oct. 15 inside an underground valve box near B Plant. This concrete structure, 241-ER-152, remains sealed, but was opened under controlled conditions to allow access to pest-control specialists.

The 10-acre radiological buffer area that had been posted and barricaded south of B Plant in the 200 East Area was released to normal operations as of Oct. 19. That area was sprayed with malathion during the weekend of Oct. 17-18 before it was reopened.

Continued on next page



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Health physics technicians, from left, Eric Alberty, Patricia Perkins and Loris Heller perform a shoulder-to-shoulder survey in the area that was closed off south of B Plant.

Approximately 18 mobile offices and metal storage boxes within the 10-acre area remain posted under radiological control regulations, pending detailed surveying. As a precaution, the number of workers taking bioassay tests to check for possible contamination uptake was expanded to 104. As of press time last Thursday, 62 results of these tests had been returned. All of the results were negative, except for those of one individual who tested positive at an extremely low level for strontium-90 early in the bioassay program. This may be a "false positive," and the individual is being retested.

Trash diverted

Disposal of the ordinary trash generated daily across the Hanford Site continued in low-level burial grounds in the 200 West Area. Deliveries of such solid waste to the Richland City Landfill were stopped as of Sept. 30. City and Department of Energy officials are meeting daily to try to reach agreement on conditions that could allow resumption of solid waste deliveries to the city. Under the current permit obtained from state health officials, site trash can continue to go to Hanford burial grounds until a volume limit of 50 loads is reached. DOE expects to reach that limit sometime in late fall, but hopes to have a plan for off-site disposal before that time.

Dumpsters on site have been surveyed by health physics technicians and marked with the survey dates.

Employees can feel free to dispose of trash in all marked dumpsters. Contaminated dumpsters have been staged at burial grounds in 200 West.

According to Jim Mecca, DOE Richland's deputy assistant manager for Facility Transition Programs, issues under discussion with the City of Richland include surveying methods and duration for site trash, and other terms and conditions of the waste disposal contract.

"The DOE has a commitment to be a good neighbor in the Hanford region, and we intend to live up to that," Mecca said. "We value our partnership with the City of Richland, and we know that, fundamentally, we all want the same things—a positive future that includes economic growth and a positive regional image."

Already, pickup of paper waste and scrap metal for recycling has restarted across the site, and the pickup of cardboard for recycling has resumed everywhere except on the 200 Area plateau (in and between 200 East and 200 West). Pickups of wood scraps and other construction debris remain on hold.

Mecca, who has spent 14 years at Hanford, took a few minutes to reflect on the uniqueness of the contamination spreads experienced in recent weeks. "We've never had anything like this before," he said, "but I'm extremely proud of the response capabilities demonstrated by everyone involved. First of all, I'm proud of our radiological control people

who detected the spots of contamination. In my opinion, that quick detection ought to give ample reassurance to everyone that we *do* control contamination every day, and that any spread outside of a controlled area is extremely rare."

Proud of teams

Bob Frix, president and general manager of DynCorp Tri-Cities Services, the FDH subcontractor tasked with refuse disposal and management, is likewise proud of the teams involved in the response to the contamination anomalies. "I've had many messages from people saying that they felt reassured by the frequent and open communication," Frix said. "The fact that we were willing to publish the exact locations and levels of contamination allowed people to have confidence that we knew what we were dealing with and that we didn't have a site-wide problem."

Shoup, whose marathon days and nights managing the overall response earned him a reputation for credibility and accessibility, said, "This episode had the potential to cause a widespread loss of trust for the Hanford Site with workers and the public. We recognized that, and made an all-out effort to respond in such a way as to earn back that trust. Nothing less would have been acceptable, and I think we met the high standard to which the people of this site and this region have a right to hold us."

Tasks remaining before the entire

event can close include finding a path forward for Hanford's everyday solid waste, surveying and releasing the facilities still posted as contaminated, determining the source or sources of the contamination, and developing lessons learned useful to other situations.

Determining the source is expected to take several weeks because of the need for careful, thorough and fair investigation. Calls have been received from around the world, inquiring about the successful handling of this event. ■

HANFORD

REACH

A publication of the U.S. Department of Energy's Richland Operations Office for all site employees

NOVEMBER 9, 1998

Another contaminated fruit fly found



A single contaminated fruit fly found among 50 in a trap next to a

U.S. Ecology trash bin has been traced to the area near B Plant where the low-level containment problem was first discovered. The trap is a little more than a mile from the 10-acre radiological buffer area.

Traces of cesium and strontium were found on the fly, linking it to the

Hanford contamination problem rather than to any operations at U.S. Ecology.

Another speck of contamination was found near the Canister Storage Building, according to Bob Shoup, Fluor Daniel Hanford vice president for Environment, Safety, Health and

Quality. The contamination was so slight it appears the spot is an old one, Shoup said.

Out of 106 tests of Hanford personnel who may have been exposed to the low-level contamination, 65 analyses have been completed — all of which showed no exposure. ■

Contract signed for trash disposal services

Michele Gerber

Fluor Daniel Hanford

DynCorp Tri-Cities Services, acting for the Department of Energy's Richland Operations Office, signed a contract last week with Basin Disposal of Pasco to remove and dispose of Hanford solid waste in an off-site location. The firm will be an "alternate source" to remove and dispose of wastes generated when the landfill maintained by the City of Richland is inaccessible to DOE and its contractors.

The contract applies to non-hazardous, non-radioactive wastes generated as everyday refuse at the Hanford Site. Delivery of such wastes to the Richland City Landfill was stopped Sept. 30, when radioactive contamination was discovered on some food wastes and garbage dumpsters in Hanford's 200 East Area. Since that time, about 25 loads of solid waste have been disposed of in low-level burial grounds in the 200 West Area. About 210 tons of garbage were removed from the Richland landfill and brought back to Hanford in early

October.

As part of the new contract, DynCorp has agreed to take "all reasonable measures" to prevent nonconforming wastes from reaching Basin Disposal's transfer station in Pasco or disposal sites in the region. Principal among those measures is a supplementary waste monitoring program that began last Wednesday. All everyday solid waste generated at the site, about 5-7 tons per day, is being spread out and surveyed by health physics technicians working in the 4843 Building in the northwest corner of the 400 Area. Site dumpsters and garbage trucks also are being surveyed.

After an initial 30-day period in which all solid waste will be surveyed, a graded approach will be applied. Site facilities have been grouped into four categories based on locations and processes. The determining factor is the likelihood or probability of radioactive contamination of refuse.

About 13 percent of site facilities — including the Volpentest HAMMER training facility, for example —

were grouped in Category 1. These facilities use no radioactive materials and are thought to have the lowest risk of generating any contaminated refuse. After the initial 30-day survey period, the solid waste from these facilities will be surveyed just once a year. Dumpsters from facilities in Category 2, comprising about 60 percent of the site, will be surveyed quarterly, and about 10 percent of the refuse loads from this category will be inspected on an ongoing basis. Dumpsters from facilities in Categories 3 and 4, about 27 percent of the site, will be surveyed monthly on an ongoing basis. Dumpsters from the Plutonium Finishing Plant will be inspected each time they are emptied.

Negotiations between the City of Richland and DOE-RL continue in an effort to reach agreement that will allow resumption of regular solid waste deliveries from the Hanford Site to the city landfill. A graded approach and other compromise measures are being discussed in those negotiations.

Fruit flies and gnats are believed to have transported contamination from

sources near B Plant in the 200 East Area to at least 26 locations in late September and October. Most of the contamination was found on food waste and dumpsters and in flying-insect traps, mobile offices and some construction shops in a 10-acre area just south of B Plant. However, two spots of contamination were detected in the 200 West Area, and one was found at the U.S. Ecology site just over two miles from B Plant.

Most recently, two dead flies with beta/gamma contamination were found last week in the 2247-B ironworkers shop in 200 East. Two dead contaminated flies were found in the same location on Nov. 6. The office area of 2247-B has been posted as a radiological buffer area.

Bioassay tests were conducted on 106 employees. Of those, results have come back on 95 and all show negative exposure.

More information can be found on the Hanford Web site at <http://www.hanford.gov/safety/conspread/index.html>. ■

The Year in Review 1998

200 Area contamination spread contained

10 Radioactive contamination was spread outside of radiological control areas to 26 locations in Hanford's 200 Area during late September and October. Spread mostly by fruit flies and gnats, some contamination went to the Richland City Landfill in site garbage trucks. Radiological control experts mounted an all-out effort to identify, contain and control the contamination. Solid waste deliveries from Hanford to the city landfill were discontinued, and 210 tons of such waste were removed and placed in low-level burial grounds on site.

In December, the city accepted a "memorandum of agreement" with the Department of Energy that outlines a new trash surveying protocol and forms the basis for resumption of solid waste deliveries from the site to the city landfill. In the meantime, a contract was signed with Basin Disposal, Inc. of Pasco to provide alternative trash disposal services to the Hanford Site.

The contamination consisted of low-level beta/gamma-emitting radioactivity, mostly containing strontium-

90 and cesium-137. Site personnel roped off acreage in the 200 East Area and conducted detailed ground and facility surveys until the area was certified as free of contamination.

Pest specialists also conducted intensive spraying to eradicate the pests, and trapped insects at locations both on and off the site to verify control measures.

Fluor Daniel Hanford and DOE officials responding to the contamination spreads adopted the "zero tolerance" position that any contamination outside of radiological control areas is unacceptable. Working in a partnership role with the City of Richland and the surrounding area, they issued repeated all-employee bulletins and held news interviews to keep employees and the public informed and assured. They also established an Internet site, made radio announcements about the events, and offered personal and vehicle surveys to persons requesting them.

As the incident wound down, the open communication effort as well as the intense and focused physical response won praise from employees, the public and DOE. ♦



Surveying for low-level contamination just south of B Plant

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